

REMARKS

Reconsideration of the present application is respectfully requested.

The undersigned wishes to thank Examiner Nguyen for the courteous interview which was accorded to the undersigned.

The present invention relates to a hydraulic circuit which comprises a hydraulic pump, a hydraulic actuator, and a valve mechanism. The accumulator forms a pressure space and includes a bellows which divides the pressure space into a gas chamber and a hydraulic fluid chamber. The accumulator also includes an inflow passage through which hydraulic fluid from the hydraulic pump is introduced into the hydraulic fluid chamber, as well as a discharge passage, independent of the inflow passage, from which the hydraulic fluid from the hydraulic fluid chamber is discharged to the hydraulic actuator. The inflow passage is in non-communication with the gas chamber. The accumulator is not operating when the pressure in the hydraulic fluid chamber is less than a set pressure and is operating when the pressure in the hydraulic fluid chamber is at least the set pressure. A valve mechanism restricts the discharge of the hydraulic fluid from the hydraulic chamber to the hydraulic actuator when the pressure in the hydraulic fluid chamber is less than a set pressure and releases the restriction on the discharge of the hydraulic fluid to the hydraulic actuator when the pressure in the hydraulic fluid chamber is at least the set pressure. The valve mechanism also possesses an air discharge passage for discharging air from the hydraulic fluid chamber to the hydraulic actuator in the state in which the accumulator does not operate.

Claim 1 stands rejected over Fig. 4 of Montgomerie et al. (U.K. 1,127,731). As explained during the interview, Fig. 4, while depicting a flow regulator, does not

depict an accumulator. The device depicted in Fig. 4 of Montgomerie et al. includes a bellows 43 which expands and contracts in response to pressure pulsations in a liquid flow, and includes a valve 47 which restricts the discharge of liquid. However, note that the inlet 40 of the device communicates not only with the liquid chamber inside of the bellows (via port 45), but also with the liquid chamber surrounding the bellows (via port 41). Thus, when liquid flow is established through the device, the pressure outside of the bellows is caused to exceed the pressure inside of the bellows (due to the restrictor 46), to cause the bellows to contract (see page 2, lines 59-75 of Montgomerie et al.). As that contraction occurs, the bellows will be able to expand and contract in response to pulsations in the liquid flow, in order to generally isolate those pulses from a region downstream of the flow regulator.

It will thus be appreciated that the device of Montgomerie et al. is functioning as a flow regulator but not as an accumulator (see page 3, lines 46-47 and 81-84, and claim 7 of Montgomerie et al.).

Current claim 1 has been amended to recite a bellows which divides the pressure space into a gas chamber and a hydraulic fluid chamber, and wherein the inflow passage is in non-communication with the gas chamber. In contrast, the device shown in Fig. 4 of Montgomerie et al. has spaces disposed inside and outside of the bellows, both of which are liquid chambers, and both of which communicate with the inflow passage, as explained above. There is no gas chamber therein as presently claimed.

Accordingly, during the interview, it was agreed that claim 1, as amended herein, distinguishes patentably over Montgomerie et al. Since claim 1 is still generic

to all of the claimed specie of the invention, it is submitted that all of the dependent claims, including the withdrawn claims, should be allowed along with claim 1.

In light of the foregoing, it is submitted that the application is in condition for allowance.

Respectfully submitted,

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